



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/511,582

10/18/2004

Epke Bosma

19200-000041/US

4500

30593

7590

12/16/2008

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

NGUYEN, SON T

ART UNIT

PAPER NUMBER

3643

MAIL DATE

DELIVERY MODE

12/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/511,582	BOSMA, EPKE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Son T. Nguyen	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1-3,5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The added limitation of "said second indicator of mastitis not based on a milk quality measured by the first indicator" is not explained or described well enough in the specification for one to understand. The second indicator of mastitis does depend on the first indicator milk quality (which influences or indicates mastitis or not) in order for the second indicator to be performed because the claim clearly states that "and only if said first indicator of mastitis indicates mastitis, a second indicator of mastitis is performed." If the quality of milk from the first indicator is not good, then a second indicator of the quality is performed, thus, the added limitation seems to contradict the inventive concept. As explained on page 7 of the remark filed 9/2/08, Applicant explained that this added limitation is meant to say that two different types of mastitis indicators are employed and one indicator measures milk conductivity and the other indicator measures cell count. However, this is not the same as added in the claim because the added limitation does not state two different indicators measuring two

Art Unit: 3643

different qualities. The quality of the milk is an indicator of mastitis or not, and it is from this quality of milk from the first indicator that the second depends on in order to perform a second reading if the milk has mastitis or not.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-3,5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** The added limitation of “said second indicator of mastitis not based on a milk quality measured by the first indicator” is confusing and unclear because if one reading the lines preceding this limitation in claim 1, it appears that the second indicator does based on the quality measured from the first indicator, and quality indicates mastitis or not. This added limitation is not the same as saying measuring mastitis with two different types of indicator, which one measures conductivity and the other measures cell count.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3,5,7 are rejected under 35 U.S.C. 103(a) as being unpatentable over van den Berg (5704311) in view of Birk (SE 200000179A on form PTO-1449).**

Art Unit: 3643

For claims 1-2, van den Berg teaches a method for separating a first quantity of milk drawn from a milking animal in an automatic milking machine and a second quantity of milk drawn from the milking animal in said milking machine, comprising: milking an animal using said automatic milking machine 18, measuring a first indicator of mastitis during said milking (col. 1, lines 50-55,col. 2, lines 11-35, first indicator indicates mastitis by decreasing below threshold value D1 calculated from mastitis sensor M and flow sensor S), and only if said first indicator of mastitis indicating indicates mastitis (by falling below threshold value D1), a second indicator of mastitis is performed (col. 1, lines 50-55,col. 2, lines 11-35, second indicator of mastitis is the threshold value D2, which depends on the extent of the mastitis result of D1, D2 also based on calculation of mastitis sensor M and flow sensor S), said second indicator of mastitis not based on a milk quality measured by the first indicator (because of progression of milk yield and flow versus time, meaning the first indicator might have a higher yield than the second indicator or vice versa, col. 2,lines 28-35), said second indicator of mastitis includes: analyzing at least a part of said first quantity of milk using mastitis sensor M and flow sensor S, and operating a valve 24 in dependence on the threshold value reading indicating mastitis. However, van den Berg is silent about an on-line cell counter and plurality of containers correlating to first, second, and third threshold values for different superior quality of milk.

Birk teaches similar method as that of van den Berg in which Birk employs an on-line somatic cell sensor/counter 25 together with a computer 35 to obtain cell readings to detect mastitis. In addition, Birk also teaches operating valves 2a-5d in

Art Unit: 3643

response to the cell readings in relation to threshold readings so as to separate the milk in different containers according to different milk quality. It would have been an obvious substitution of functional equivalent to substitute the sensors as employed in van den Berg with an on-line cell counter as taught by Birk, since a simple substitution of one known element for another would obtain predictable results. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007). In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ various containers as taught by Birk to contain different quality of milk based on cell counts in relation to threshold values in order to separate the milk into different level of quality of milk for sale or other use.

For claim 3, van den Berg as modified by Birk (emphasis on van den Berg) further teaches wherein said first indicator of mastitis is one indicator, or a selection of multiple indicators (van den Berg teaches flow and mastitis sensors together), selected from a group of indicators comprising: the conductivity of said first quantity of milk, the NAgase value of said first quantity of milk, the Urea value of said first quantity of milk, the temperature of said first quantity of milk, the milk flow from said milking animal or the milk quantity from a teat of said milking animal

For claim 5, van den Berg as modified by Birk further teaches wherein said first quantity of milk drawn from one milking animal is collected in an end unit for the duration of performing the somatic cell count.

For claim 7, in addition to the above, Birk teaches a method for separating a first quantity of milk drawn from a milking animal in an automatic milking machine and a

Art Unit: 3643

second quantity of milk drawn from the milking animal in said milking machine comprising milking an animal using said automatic milking machine, wherein said first quantity of milk is collected from a first milking animal and said second quantity of milk is collected from a second milking animal (page 4, lines 17-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk be collected from a first milking animal and said second quantity of milk be collected from a second milking animal as taught by Birk in the method of van den Berg as modified by Birk in order to save time and cost by having the total milk from all animals be analyzed for mastitis and not just one animal only.

**7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over van den Berg as modified by Birk as applied to claim 1 above, and further in view of Nilsson (204/0168643A1 ).**

van den Berg as modified by Birk is silent about wherein said first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal.

Nilsson teaches similar method as that of van den Berg as modified by Birk in which Nilsson teaches wherein said first quantity of milk is collected from a first teat of milking animal and said second quantity of milk is collected from a second teat of said milking animal. See [0018] thru [0021]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal as taught by Nilsson in the method

Art Unit: 3643

of van den Berg as modified by Birk in order to analyze all teats for mastitis and not just only one teat.

***Response to Arguments***

8. Applicant's arguments filed 9/2/08 have been fully considered but they are not persuasive.

**Applicant argued that Birk does not teach or suggest a "second indicator of mastitis includ[ing] analyzing at least a part of said first quantity of milk using an on-line cell counter for counting the number of cells." Rather, Birk very briefly suggests only a measuring element that may be flow sensor or a floating body whose buoyancy indicates the quality of milk. See Birk, p. 4, 11. 2-6; p. 5, 11. 15-28; FIG. 1, element 25. A flow sensor and a floating body are not "on-line cell counters" and cannot measure cell counts of milk. Where Birk describes cell counts as an indicator of mastitis, it does not disclose any apparatuses capable of doing so, such as an on-line cell counter.**

Clearly from page 4, lines 5-15, Birk teaches measuring elements 25 for measuring quantity and quality such as conductivity, temperature, light absorption, blood content, somatic cell count, etc., thus, obvious this apparatus 25 is capable of counting cell because counting cell is one of the quality/quantity that Birk states that this element 25 can performed in correlation with a computer 35. On-line merely means through a computer system, which, again, clearly, Birk teaches measuring elements 25 in correlation with computer 35. The floating body in line 2-6 on page 4 is one option but



Art Unit: 3643

if Applicant reads on to lines 5-15, Birk clearly states the measuring elements 25 can be used as an alternative to the flow sensor or the floating body.

**Applicant argued that claim 1 has been amended to clarify that the second indicator of mastitis is "not based on a milk quality measured by the first indicator." For example, the first indicator may measure milk conductivity and then the second indicator may measure cell count, without measuring conductivity at all. Applicants respectfully submit that van den Berg fails to teach or suggest a second indication of mastitis, let alone one based on an independent milk quality.**

As mentioned in the 112 rejections above, this added limitation is unclear and does not reflect Applicant's explanation regarding using two different types of indicator for two different readings. In addition, even if this added limitation is clear, which it is not, van den Berg still teaches the limitation because, from col. 2, lines 11-35, the second indication of mastitis is the threshold value D2, which depends on the extent of the mastitis result of D1, and D2 is of different quality than D1 because of different progression of milk yield versus time. Note also that col. 8, lines 52-65, talk about the two indicator of mastitis, D1 & D2, which D2 is dependent on D1. Both D1 and D2 are readings from mastitis sensors and flow sensors, which each D1, D2 is of different quality due to progression of milk yield.

**Applicant argued that Nilsson is silent with regard to an on-line cell counter and two independent mastitis indicators.**

Art Unit: 3643

Note from the rejection that Nilsson was not relied on for an on-line cell counter and two independent mastitis indicators. Nilsson is relied on for a teaching of wherein said first quantity of milk is collected from a first teat of milking animal and said second quantity of milk is collected from a second teat of said milking animal. See [0018] thru [0021]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal as taught by Nilsson in the method of van den Berg as modified by Birk in order to analyze all teats for mastitis and not just only one teat.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3643

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Son T. Nguyen/  
Primary Examiner, Art Unit 3643